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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/965,518 | 09/25/2001 | Nagabhushana T. Sindhushayana | 000400 | 3313 |
| 23696 | 7590 | 06/23/2006 | | |
| QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121 | | | EXAMINER TORRES, JUAN A | |
| | | | ART UNIT 2611 | PAPER NUMBER |

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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| Advisory Action Before the Filing of an Appeal Brief | Application No. 09/965,518 | Applicant(s) SINDHUSHAYANA ET AL. | |
| | Examiner Juan A. Torres | Art Unit 2611 | |

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 05 June 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: _____.
- Claim(s) objected to: _____.
- Claim(s) rejected: _____.
- Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see above.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

Continuation of 3. NOTE: The proposed amendments to claim 1 raise new issue "to update al said computational nodes C and D at different instances of time in one step" that would require further considerations and/or search.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed on 06/05/2006 have been fully considered but they are not persuasive.

Regarding Finality of the Action:

The Applicant contends, "The Final Office Action was the first Action after filing of a Request for Continuing Examination under 37 C.F.R. 1.114 (RCE). Notwithstanding this fact, the Action was made final. The reason given for the finality was that "[a]ll claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the pounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114," citing MPEP 706.07(b). Applicants request withdrawal of the finality of the Action for the following reason. In the Reply to Office Action filed with the RCE, independent claims 18 and 22 were amended by addition of limitations. While the present Final Office Action rejected these claims on the same art as the previous Action, it did not assert that the additional limitations in these claims add nothing to the invention. The Final Office Action did not make any showing that the invention of claims 18 and 22 as they stand now is the same as it was in the claims of the application prior to the amendment filed with the RCE. It appears that the Examiner's position is that, as a rule, the first Office Action after a submission of an RCE can be made final if the claims can be rejected on the same art as was used to reject the claims prior to the RCE. This is not the rule of procedure in the Office. Claims

18 and 22 recite additional limitations that were not presented in these claims prior to the submission of the RCE under 37 C.F.R. 1.114. Therefore, these claims are not "drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114," as required by MPEP 706.07(b). It follows that the claims should not have been finally rejected. Applicants request withdrawal of the finality of the Action and entry of the above amendment"

Additionally, amendment of claim 6 complies with objection or requirement as to form and adopts the Examiner's express suggestion. The amendment should therefore be entered even if finality of the action is maintained. MPEP 714.12 & 714.13".

The Examiner disagrees and asserts, as indicated in the previous office Action, All claims were drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, the previous action was made final even though it is was first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

If the new claims were not draw to the same invention, the amendment would not be enter, because newly submitted claims would be directed to an invention that is independent or distinct from the invention originally claimed. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits.

Accordingly, the new claims will be withdrawn from consideration as being directed to a non-elected invention (See 37 CFR 1.142(b) and MPEP § 821.03).

After the Applicant's representative contacted the Examiner, asking for clarification regarding the finality of the previous Office action, the Examiner review the Finality of the previous Office action with two Supervisor Patent Examiners (SPE), two Primary Examiners, one Patent Examiner and one Special Program Examiner (SPRE) and the Finality was consider proper by all of them.

For these reasons and the reasons indicated in the previous Office action the Finality of the Office action is maintained.

The Applicant contends, "Additionally, amendment of claim 6 complies with objection or requirement as to form and adopts the Examiner's express suggestion. The amendment should therefore be entered even if finality of the action is maintained. MPEP 714.12 & 714.13".

The Examiner disagrees and asserts, as indicated in the previous office Action, the previous Office action was made final, and the present Office action is an Advisory with two options (see attachment), to enter the amendments or not to enter the amendments. The proposed amendments to claim 1 raise new issue "to update al said computational nodes C and D at different instances of time in one step" that would require further considerations and/or search, for that reason the amendments are not entered.

Regarding Drawings:

As indicated above the amendment will not be entered, for this reason the Examiner maintain the objection to the drawings of the previous Office action.

The Examiner also notes that in figure 2 block 201 that reads " S_{i-1} " is improper and should read " S_{i-1} "; and block 203 that reads " S_{i+1} " is improper and should read " S_{i+1} " (see specification paragraph [00019]).

Regarding Specification:

The Applicant contends, "The first two suggestions were to bring commas outside quotation marks in two places. Applicants respectfully traverse these objections. Even if style were a proper target of objections to the specification, the standard usage is to place commas inside quotations marks. See, for example, The New York Times Manual of Style and Usage 278 (Siegal and Connolly eds., 1999) ("Periods and commas, in American usage, always go inside the closing quotation marks, regardless of grammatical logic."); see also Strunk and White, The Elements of Style 36 (4 ed. 2000) ("Typographical usage dictates that the comma be inside the (quotation) marks, though logically it often seems not to belong there".

The Examiner disagrees and asserts, as indicated in the previous office Action, the comma should be out of the quotation marks. It is just common sense. The intention of the Examiner is to put the Application in better conditions.

Regarding Claim objections:

As indicated above the amendment will not be entered, for this reason the Examiner maintain the objection to clam 6 of the previous Office action.

Regarding Claim 1:

The proposed amendments to claim 1 raise new a issue “to update al said computational nodes C and D at different instances of time in one step” that would require further considerations and/or search.

Regarding Claim 6:

The Applicant contends, “claim 6 recites that “said triggering of computational node C at different time instances in said least two subsets occurs concurrently.” At least for this reason, Applicants respectfully submit that Figure 5 does not anticipate claim 6”.

The Examiner disagrees and asserts, as indicated in the previous office Action admitted prior art in FIG. 5 shows a method for decoding a sequence of turbo encoded data symbols transmitted over a channel comprising: updating channel nodes R_x , R_y and R_z based on a received channel output (in FIG. 5 R_x is block 501 input 541 and 542; R_y is block 501 input 542 and R_z is block 502 input 540); initializing outgoing messages from symbol nodes X_i , Y_i and Z_k where the symbol nodes X_i , Y_i and Z_k are in communication with the channel nodes R_x , R_y and R_z (X_i is block 501 output 550; Y_i is output of block 520 line 542 and Z_k is output of block 520 line 540); and triggering updates of computational nodes C and D, (computational node C is block 501 and computational node D is block 502) associated with different instances of time, in accordance with a triggering schedule, where a computational node C_i is in communication with the symbol nodes X_i , and Y_i and a computational node D_k is in communication with the symbol nodes X_i and Z_k . (FIG. 5 input of block 501 – C – have

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inputs X_i , and Y_i and block 502 – D – have inputs X_i and Z_k); partitioning the computational node C at time instances $C_0, C_1, C_2, \dots, C_N$ into at least two subsets, where the triggering schedule includes triggering updates of computational nodes C in a sequence at different time instances in each subset (FIG. 5 input 541 of block 501 wait until block 502 produces its output 560 and that output is deinterleaved by block 531 and this process is repeated until a determined number of iterations that define a number of subsets) and where the triggering of computational node C at different instances in the at least two subsets occurs concurrently (block 501 (computational node C), is the first decoder with inputs, essentially, X (information data) and Y (first parity), when the first decoder finish, pass the output to block 502 (computational node D), that at a different instant in time, essentially concurrently, with inputs X (information data) and Z (second parity, or parity from the second encoder) produces the first estimation of the data in iteration zero. To produce the first iteration (here the term turbo) the information from the decoder 502 have to go to the first decoder 501 as extrinsic information, and the first decoder have to run again producing a new output, for this reason, the computational node C have to have at least two subsets, to produce the first iteration. Without a first iteration the turbo process doesn't take place).

The specification discloses "The sequence of computation nodes $C_0, C_1, C_2, \dots, C_N$ may be divided into several overlapping sub-blocks, and the nodes are triggered sequentially within each sub-block, but concurrently across all sub-blocks".

In Figure 5 for example the first subset could be C_0 and C_1 (first decoder in iteration zero and first decoder in iteration 1), the second subset could be C_1 and C_2

(first decoder in iteration 1 and first decoder in iteration 2), etc.. so divided into several overlapping sub-blocks, and the nodes are triggered sequentially within each sub-block (iteration 1 needs to wait for iteration zero, because the input of iteration 1 need that iteration zero to be performed previously), but concurrently across all sub-blocks, because the successive iterations "have to be convergent", "they have to agree in opinion", "they have to meet or tending to meet the same point", "they can be processed at the same time that other processes" such as the D, "they can acting in conjunction with other processes" such as D, "meeting or tending to meet the same point"; "in accordance" and "in harmony" to the encoded data if not, instead of improving the results with each iteration the results will diverge and then decoder is not working because in each iteration produce a worst result that in the previous iteration, and the decoder will diverge.

For these reasons and the reasons indicated in the previous Office action the rejection of claim 6 is maintained.

Regarding Claims 18 and 22:

The Applicant contends, "Applicants respectfully point out again that there is no disclosure in Figure 5 of the nodes of the two decoders being triggered concurrently, i.e., at the same time. At least for this reason, Figure 5 does not anticipate claims 18 and 22".

The Examiner disagrees and asserts, as indicated in the previous office Action, and as indicated with more detail in the respond to arguments of claim 6, admitted prior art in FIG. 5 shows teaches two decoders being triggered concurrently, because the

successive iterations “have to be convergent”, “they have to agree in opinion”, “they have to meet or tending to meet the same point”, “they can be processed at the same time that other processes” such as the D, “they can acting in conjunction with other processes” such as D, “meeting or tending to meet the same point”; “in accordance” and “in harmony” to the encoded data if not, instead of improving the results with each iteration the results will diverge and then decoder is not working because in each iteration produce a worst result that in the previous iteration, and the decoder will diverge.

For these reasons and the reasons indicated in the previous Office action the rejection of claims 18 and 22 are maintained.

Other claims:

The Applicant contends, “The above discussion addresses rejections of all independent claims of the application. Dependent claims should be patentable at least for the same reasons as their base claims and intervening claims, if any”.

The Examiner disagrees and asserts, as indicated in the previous office Action, because the rejections of the independent claims is maintained, the rejections of the dependent claims is also maintained.

For these reasons and the reasons indicated in the previous Office action the rejection of other claims are maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is (571) 272-3119. The examiner can normally be reached on Monday-Friday 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Juan Alberto Torres
06-09-2006

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PRIMARY EXAMINER
6/12/06